CITY OF TEMPE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

TABLE OF CONTENTS

SUBJECT: *REQUIREMENTS FOR SECURING A PERMIT FOR UTILITY CONSTRUCTION IN PUBLIC RIGHTS-OF-WAY AND UTILITY EASEMENTS*

I. PURPOSE

This manual specifies the requirements for securing a permit for utility—including telecommunications—construction in public rights-of-way and public utility easements.

II. GENERAL INFORMATION AND OVERVIEW OF PROCESS

The City of Tempe grants permission for locating existing utilities and for all construction or maintenance work in public rights-of-way and public utility easements by issuance of a permit within the City Engineer's Office per Section 29 of the City Code.

Utility companies, Irrigation and Power Districts, governmental agencies, and other companies providing cable television, communication lines, electricity, gas, irrigation, petroleum, etc. receive permits from the Engineering Division.

The City of Tempe administers all utility line planning, permitting, and construction processes in accordance with the Arizona Utility Coordinating Committee (AUCC) Public Improvement Project Guide and the Maricopa Association of Governments (MAG) uniform standard specifications—except as may be modified by this manual.

Need for a Permit

Permits are necessary to assure that all utility company facilities are constructed in the proper location with adequate spacing, built with acceptable materials and in accordance with current specifications, installed in a safe manner, and that final completion is assured and acceptable; all infrastructure is protected, all landscaping is restored, and liability issues are properly addressed

Permits are required for not only constructing or maintaining all utility company facilities but also all barricading for traffic control and locating existing facilities within public rights-of-way and public utility easements.

Engineered construction drawings (plans) must be submitted for review. The objective is to make optimum utilization of the space available in the public rights-of-way and public utility easements to assure compliance with all City policies, to coordinate with other utility companies, agencies, and City Project activities, and to reduce risk and/or inconvenience to the public.

Permit Process-Overview

A *"Permit Application for Construction in Public Rights-of-Way and Public Utility Easements"* is submitted to the City of Tempe, Engineering Division (31 East 5th Street) together with a minimum of three (3) sets of construction drawings, details, notes, etc.

Upon receiving the application and appropriate drawings, details, notes, etc., the City staff will log the request into the City's automated permit system and route the documents for technical review in accordance with the Permit Processing Flow Chart (Exhibit D). This review includes checking for compliance with construction standards, approving alignments, verifying that the work is in the public right-of-way or public utility easement, determining if other work is occurring at the same time or site, verifying that all joint trench opportunities have been incorporated into the design, checking for conflicts, determining if the work is proposed in newly paved streets or alleys, checking traffic flow requirements, verifying that proper pavement replacement or bore requirements (Exhibit H) have been incorporated into the plans, and verifying that all City requirements have been met. The City requires that all permitted projects comply with the Arizona Utility Coordinating Committee project models, including the Joint Trench Use Model and the Western Underground Trench Formula.

Upon completion of the review (approximately five working days), a permit will be either issued to the applicant or returned for further modifications. Permits are generally issued for 90 days. Special conditions or stipulations may have been added to the permit application before issuance so it is important that these conditions be carefully reviewed by the applicant for compliance. If additions or corrections are required to the plans or permit application, the applicant will be notified and asked to make corrections and resubmit.

Fees for all permits will be charged as set forth by City policy (Exhibit E). Permittees must demonstrate proof of insurance (Exhibit F) with agreed to limits of liability and naming the City as additionally insured before issuance of any permits. The fee and insurance requirement may be satisfied by agreement.

Construction

Any work in the street will require an approved construction plan and a site-specific traffic control plan (TCP) before beginning construction. The contractor must have these plans available at the project site at all times. A construction schedule shall be submitted, noting starting and completion dates, five working days before starting construction. This schedule may be faxed (480-350-8591) using the notification form in Exhibit G. The utility company is to inspect their work with the City providing periodic oversight. Requests for City inspections must be made a minimum of 24 hours in advance of required inspection. Excavations may not be backfilled without satisfactory City inspection. "Record Drawings" must be maintained by the owner of the facility in accordance with State Statutes and made available to the City upon request.

III. PERMIT APPLICATION AND FEES

Application for a permit, along with supporting documentation, is submitted on a *"Utility Permit Application Form"*. This form should be used for all utility permits. A sample application is shown on Exhibit A.

If the application is contingent on right-of-way, trenching, conduit, etc. supplied by customer then this should be noted. The permit will be issued but no work shall commence until the applicant's customer has completed these requirements. Annual blanket permits are issued for emergency work and for recurring minor facility maintenance work in public rights-of-way and public utility easements. Blanket permits are also issued for potholing existing utilities for design purposes and pulling conductors in existing infrastructure (no excavation).

Permits fees and other construction costs are collected upon issuance of each individual permit in accordance with the fee schedule in Exhibit E - except as superseded by the license agreement. Seal coat charges are also collected upon permit issuance in accordance with MAG specification 336.2.4.

The intent of the City's Pavement Management Program is to avoid cutting new street pavement or newly resurfaced pavement. In the event that a street opening in new pavement cannot be avoided, a surcharge fee (Exhibit E) to cover damages and early deterioration will be assessed for cutting new or resurfaced pavements less than seven years old. On joint trench projects, the surcharge fee will be apportioned to the participating utilities. Potholing will be exempted from the surcharge. Resurfaced pavements include **micro surfacing and slurry sealing** but do not include **local street fog seals**.

IV. CONSTRUCTION PLAN REQUIREMENTS

A. **Plan Requirements** - Complete construction plan drawings shall be provided showing:

1. An appropriate scale to accurately indicate relationships among the physical features within the construction area. A scale of 1" = 40' is suggested as a minimum.

2. Existing and proposed rights-of-way and public utility easements with dimensions. This information is available at the Engineering Information Counter (480-350-8288).

3. Location and size of all existing and proposed facilities and street improvements to which the proposed construction will either cross or run parallel within the right-of-way corridor.

When proposed facilities are located within an alley or behind curb and gutter, all of the following existing facilities shall be shown for the entire alley or area behind the curb: curb, gutters, sidewalks, paving, storm drains, sanitary sewer lines, waterlines, irrigation facilities, street lights, other utilities, landscaping, structures and traffic signals shall be shown, drawn to scale. Simply using a symbol to indicate these facilities is not sufficient. A legend should be included to distinguish each type of improvement.

Service installations in alleys (excluding bores) or public utility easements shall show sufficient information to indicate location and to prevent conflict or hazard.

4. Locations and limits of proposed construction.

5. Dimensioned ties to monument lines in streets and to property lines in alleys and easements.

6. Topography taken by field or aerial surveys or from up-to-date City record drawings showing what is existing in the area of proposed construction.

7. A vicinity map indicating major cross streets and North arrow.

8. A note stating "Notify Arizona Blue Stake before Construction".

9. Tempe General Notes for Utility Construction (Exhibit B).

B. **Profile Requirements** - Complete profile drawings showing the following minimum requirements shall be provided for all projects that require utilities to be bored. An accurate profile must be approved on the permitted plans before starting the bore. These requirements apply to not only **longitudinal** and **lateral** street bores but also utility bores outside paved areas crossing existing utilities.

1. Show a plan and profile of each proposed bore (use Tempe detail T-455 as an example) along with boring and receiving pit locations.

2. Provide elevations taken from the existing surface grades at intervals of 100' or less in the same alignment as the proposed construction. The profile shall be shown as a continuous line on the plans throughout the project. Finished and/or natural grade profile shall be shown within the proposed construction area.

3. Show all existing and proposed facilities that the proposed construction would cross. Storm drains, irrigation lines, sanitary sewer lines, waterlines, conduit systems, underground utilities shall be drawn to full scale. When exact depths are unreliable on as-built plans, existing utilities must be potholed in the field and their locations shown accurately on the plans before a permit is issued.

4. Provide a soil analysis showing the gradation of the soil in the bore area indicating the feasibility of boring through the existing material. Use the data

sheet in (Exhibit H) to complete bore planning and submit this with your plans. Reliable historical information about the existing soil conditions, such as previous project soil analyses, may be used instead of providing new soil data.

5. For clarity, a vertical scale that adequately depicts installation of existing facilities is required. Please specify scale (1" = 2', 1" = 3', 1" = 4', 1" = 5'). Designers should usually use different vertical and horizontal scales on profile details.

6. Elevation shall be City of Tempe datum and indicated on the plans.

7. Existing facilities shall be drawn showing their approximate outside dimensions.

8. Profile designs shall provide a minimum of 24 inches of clearance between the outer edge of the facilities being bored to any city owned infrastructure, including water, sewer, storm drain, and irrigation lines. Clearances to all other utilities shall be a minimum of 12 inches or per the requirements of the owner of the utility, whichever is greater.

C. Underground Requirements

1. Temporary overhead services for construction may be permitted for a specified period. No final occupancy will be given until all temporary services are removed.

2. All new facilities are required to be installed underground unless specific approval is obtained from the City Engineer.

3. Location for new utilities shall be in accordance with City of Tempe standard details.

4. Depth requirements shall be in accordance with (Exhibit C).

V. CONSTRUCTION REQUIREMENTS

A. All installations shall:

1. Be governed by the City of Phoenix Traffic Barricade Manual and/or added specific traffic regulation, which shall be attached to the approved permit whenever applicable.

2. Conform to the latest applicable MAG Uniform Standard Details and Specifications and the current City of Tempe Supplements thereto.

B. Vacuum excavation in the right of way shall be accomplished as follows:

1. A permit is required for all utility location work.

2. Potholes shall not exceed 12” x 12” and shall conform to MAG Uniform Standard Detail 212.

3. Within seven working days of the vacuum excavation, a 6-inch thick hot mix permanent patch (2” lifts) will be placed over one of the following backfill strategies:

    a. Pea gravel for full depth on holes to be re-excavated.

    b. ½ sack CLSM from 6” above the top of the highest utility to the bottom of the new asphalt.

4. No steel plates or plugs will be allowed in arterial streets.

5. An approved traffic plan must be with the crew at all times.

6. Unauthorized nighttime digging will not be allowed.

7. At least one hole at each location must be marked with the initials of the excavating company. A spray stencil is acceptable.

C. Before starting any street bore that crosses a major roadway, the contractor must schedule a separate field meeting with the project inspector to verify that all Bluestake™ and design requirements are met.

D. Telecommunications Cable Installation (Copper or Fiber Optic)

1. “**Trunk Lines**” Cable providing telecommunications service by connecting regions or states, or by connecting central offices within a metropolitan area. Such cable shall be installed as described below:

    a. If the cable is to be installed within an open trench then the cable shall be placed within a schedule 40 PVC or an approved equivalent conduit. The conduit shall be buried at a minimum depth of 48 inches, measured to the top of the conduit. A 6” thick colored concrete cap shall be poured above the conduit. A color coded plastic warning tape with a minimum thickness of 5 mil, and a minimum width of 3 inches shall be installed in the trench above and centered over the concrete cap at a depth of from 12 to 18 inches below the surface.

    b. Cable crossing under existing paved streets shall be accomplished by jacking or boring unless open trenching is authorized by the City Engineer. The cable shall be placed within a schedule 40 PVC conduit, or an approved equivalent or better alternate, at a minimum depth of 48 inches.

c. If cables are to be installed in existing duct banks then they shall be placed within the duct bank, in a manner that provides the best available protection for the cables to minimize the chance for damage to the cables by excavation around the duct bank systems.

2. **Telecommunications Cables** other than "Trunk Lines" shall be installed as described below:

   a. If a cable is to be installed within the right-of-way of a local street then it shall be placed within a schedule 40 PVC or an approved equivalent conduit. The conduit shall be placed at a minimum depth of 36 inches; except that when it is placed under a planned street pavement it shall be placed at a minimum depth of 48 inches.

   b. Cable crossings under existing paved streets shall be accomplished by jacking or boring, unless open trenching is authorized by the City Engineer.

   c. Cables to be installed in existing duct banks shall be placed within the bank in a manner that provides protection appropriate for the level of service provided by the cable.

3. If a cable that is to be installed is fiber optic then a tracing or locating wire shall be installed in the conduit or the trench.

E. **Abandonment of Facilities -** All facilities that are being abandoned shall be removed and existing infrastructure restored. No facility, which use is abandoned, may remain in place.

F. **Construction Schedules** - When specified by the City Engineer on the approved permit, a construction schedule must be submitted one week before construction. This schedule shall include proposed starting and completion dates.

G. **Construction signs** - All utility construction projects, which are on major streets and meet either of the following criteria, must have stationary signs posted at the beginning and the end of the project. Signs must be posted one week before the project begins until the project is completed.

The signs shall indicate the name and phone number of the permit holder along with the start and estimated completion dates for the project. Stationary sign criteria shall be used on the following types of projects:

- Projects 1 mile or greater in length.
- Projects that will last 30 days or longer.

All other utility company construction projects, which will last less than 30 days,

must have portable signs posted for the duration of the project indicating the permit holder's name and phone number. This does not apply to routine maintenance work.

VI. RECORD DRAWINGS (INSTALLATION RECORDS)

Record drawings of the complete construction shall be maintained by permittee in accordance with State Statutes and provided by them, if requested by the City Engineer.

VII. REFERENCES (Partial Listing)

A. Utility Permit Application Form.

B. Maricopa County Association of Government (MAG) Uniform Standard Specifications and Details for Public Works Construction.

C. City of Tempe Supplement to the MAG Specifications and Details

D. City of Phoenix Traffic Barricade Manual and/or Manual on Uniform Traffic Control Devices (MUTCP).

E. Arizona Blue Stake Procedures.

F. Arizona Utility Coordinating Committee (a subcommittee of the Arizona Chapter of the American Public Works Association) Public Improvement Project Guide.

G. Arizona Revised Statutes.

H. Code of the City of Tempe Chapter 29, Chapter 31, and Appendix A.

VIII. EXHIBITS

Exhibit "A"	Utility Permit Application Form
Exhibit "B"	Standard Utility Plan Notes
Exhibit "C"	Minimum Cover Requirements for Utilities in Rights-of-Way
Exhibit "D"	Permit Processing Flow Chart
Exhibit "E"	Permit & Pavement Surcharge Fee Schedule
Exhibit "F"	Insurance Requirements for Right-of-Way Permits
Exhibit "G"	Notification Form
Exhibit "H"	Drilling Fluids Bore Planning (Sample blank form)
Exhibit "I"	Utility Construction Process